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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,206	09/08/2003	Takayuki Fujii	03500.016268.1	7502
5514	7590	02/14/2005		EXAMINER
				CHEN, SOPHIA S
			ART UNIT	PAPER NUMBER
				2852

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/656,206	FUJII, TAKAYUKI	
	Examiner	Art Unit	
	Sophia S. Chen	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 13-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 September 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. 10/093,028.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 9/8/03.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No.

10/093,028, filed on March 8, 2002. ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: FG (page 13, line 3). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because the reference numeral "83" (Figure 6, above reference numeral 87) should be labeled as "81". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informality: page 6, line 3, "351" should be labeled as "315". Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 13, 15, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kikuchi (US Pat. No. 4,310,153; cited in Form PTO-1449).

The patent discloses a sheet conveying apparatus comprising: a sheet conveyer 16 for conveying a sheet 13 from a sheet tray 12 to a sheet path (Figure 1); a first

detector 21 or 61 for detecting that a sheet 13 is set on the sheet tray 12 (column 3, lines 26-27 and column 4, line 68 to column 5, line 2); a second detector 22 or 62 (or a plurality of second detectors 22, 23, 24, or 62, 63, 64), provided in the sheet path (Figure 1), for detecting the presence/absence of a sheet 13 fed by the sheet conveyer 16, the second detector 22 or 62 including a light emitting element 101 and light receiving element 103 (light emitting diode, LED; column 6, lines 10-18; Figure 5) (or each of the plurality of second detectors 22, 23, 24 or 62, 63, 64 including a light emitting element (light emitting diode; LED) 101, 109, 118 and a light receiving element 103, 112, 121 (column 6, lines 10-52 and Figure 5); and a controller for controlling the second detector(s) 62, 63, 64 not to emit light from the light emitting element(s) (or LED(s)) of the second detector(s) 62, 63, 64 before the first detector 61 detects that the sheet 13 is set on the sheet tray 12, and controlling the second detector(s) 62, 63, 64 to emit light emitting element(s) (or LED(s)) of the second detector(s) 62, 63, 64 in response to the first detector 61 which detects that the sheet 13 is set on the sheet tray 12 (column 5, lines 7-16; only on timing signal is produced at any one time to enable only one sensor, and it starts with the first sensor 61).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 14, 16, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al. (US Pat. No. 6,091,927) in view of Kikuchi.

Hattori et al. discloses an original conveying apparatus comprising: an original conveyor 8 for conveying an original 5 from an original tray 6 to an original path (Figure 1); a first detector 21 for detecting that an original 5 is set on the original tray 6 (column 3, lines 63-65 and Figure 1); a second detector 14 (or a plurality of second detectors 14, 15), providing in the original path, for detecting the presence/absence of an original 5 fed by the sheet conveyor 8 (Figure 1); and the second detector(s) 14, 15 being optical reflection type sensors (column 4, lines 23-24).

Hattori et al. differs from the instant claimed invention in not disclosing the second detector(s) including a light emitting element and a light receiving element (or LED(s)); and a controller for controlling the second detector(s) not to emit light from the light emitting element(s) (or LED(s)) of the second detector(s) before the first detector detects that the sheet is set on the sheet tray, and controlling the second detector(s) to emit light emitting element(s) (or LED(s)) of the second detector(s) in response to the first detector which detects that the sheet is set on the sheet tray.

Kikuchi discloses a sheet conveying apparatus comprising: a sheet conveyer 16 for conveying a sheet 13 from a sheet tray 12 to a sheet path (Figure 1); a first detector 21 or 61 for detecting that a sheet 13 is set on the sheet tray 12 (column 3, lines 26-27 and column 4, line 68 to column 5, line 2); a second detector 22 or 62 (or a plurality of second detectors 22, 23, 24, or 62, 63, 64), provided in the sheet path (Figure 1), for detecting the presence/absence of a sheet 13 fed by the sheet conveyer 16, the second

detector 22 or 62 including a light emitting element 101 and light receiving element 103 (light emitting diode, LED; column 6, lines 10-18; Figure 5) (or each of the plurality of second detectors 22, 23, 24 or 62, 63, 64 including a light emitting element (light emitting diode; LED) 101, 109, 118 and a light receiving element 103, 112, 121 (column 6, lines 10-52 and Figure 5); and a controller for controlling the second detector(s) 62, 63, 64 not to emit light from the light emitting element(s) (or LED(s)) of the second detector(s) 62, 63, 64 before the first detector 61 detects that the sheet 13 is set on the sheet tray 12, and controlling the second detector(s) 62, 63, 64 to emit light emitting element(s) (or LED(s)) of the second detector(s) 62, 63, 64 in response to the first detector 61 which detects that the sheet 13 is set on the sheet tray 12 (column 5, lines 7-16; only one timing signal is produced at any one time to enable only one sensor, and it starts with the first sensor 61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the sensors having light emitting elements and light receiving elements (LEDs) as taught by Kikuchi in place of the optical reflection type sensors of Hattori et al. because of the same functionality for detecting the presence/absence of a sheet.

Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the controller as taught by Kikuchi to the first and second sensors of Hattori et al. to operate in an efficient and reliable manner and to consume less electrical power (Kikuchi; column 2, lines 17-19 and 28-31).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
February 7, 2005